



## **The effect of aqueous and ethanol extract of saffron (*Crocus Sativus*) petal on rainbow trout (*Oncorhynchus mykiss*) growth performance**

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### **Abstract**

Iran, especially the provinces of South Khorasan and Razavi Khorasan, is one of the most important centers of saffron (*Crocus Sativus*) production in the world. Annually, a massive volume of saffron petals is dumped as waste. Therefore, finding a suitable solution for recycling this huge amount of waste is very important. The aim of the present study was to investigate the effects of aqueous and ethanolic extracts of saffron petals on survival and growth indicators of rainbow trout (*Oncorhynchus mykiss*). 450 rainbow trout fingerlings (mean weight  $6.6 \pm 0.19$  g) were randomly divided into three groups and fed for 6 weeks with diets containing aqueous (T<sub>1</sub> fish) and ethanol (T<sub>2</sub> fish) extract of saffron petal. No extract was added to diet of the controls (C fish). The obtained results showed that indicators of weight gain (WG), weight gain rate (WGR), specific growth rate (SGR), and daily growth rate (DGR) in T<sub>2</sub> fish were significantly higher ( $P < 0.05$ ) compared to others (T<sub>1</sub> and C fish). The highest condition factor (CF) rate was also observed in T<sub>2</sub> fish, although no significant difference was observed with the control group ( $P > 0.05$ ). The lowest length gain (LG) was observed in T<sub>2</sub> fish ( $P < 0.05$ ). No mortality was observed due to consumption of diets containing both form of saffron petal extract during the 8 week trial period. Therefore, ethanolic extract of saffron petals can be used as a growth supplement in diet of rainbow trout.

**Keywords:** Saffron, Petal, Growth, Rainbow Trout,